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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,615	06/23/2003	George B. Byma	1-73826	8851

27377 7590 11/02/2006

MACMILLAN, SOBANSKI & TODD, LLC  
ONE MARITIME PLAZA-FIFTH FLOOR  
720 WATER STREET  
TOLEDO, OH 43604

EXAMINER
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RUDDOCK, ULA CORINNA

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/601,615

Applicant(s)

BYMA ET AL.

Examiner

Ula C. Ruddock

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 6/29/06&8/16/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 21-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 21-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. The Examiner has carefully considered Applicant's response filed June 29, 2006 and August 16, 2006. All rejections have been maintained.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Response to Amendment***

3. The declaration under 37 CFR 1.132 filed August 16, 2006, is insufficient to overcome the rejection of claims 1-9 and 21 based upon Arthurs (US 5,460,870) and Michael (US 2003/0121989) as set forth in the last Office action because: it states that the claimed subject matter solved a problem that was long standing in the art. However, there is no showing that others of ordinary skill in the art were working on the problem and if so, for how long. In addition, there is no evidence that if persons skilled in the art who were presumably working on the problem knew of the teachings of the above cited references, they would still be unable to solve the problem. See MPEP § 716.04.

Applicant notes in the Declaration that unexpected results and significant advantages are attained by the claimed invention. The Declaration states that the carbon fibers and basalt fibers may have a higher tensile strength and could therefore achieve the same strength with less weight. Further, the Declaration states that carbon and basalt fibers do not present the problems associated with handling glass fibers and can be used in different length, diameters and mat configuration, is more recyclable, can be reclaimed after incineration for refuse. However, it is

noted that the instant claims do not recite any of these features. The claims do not recite the tensile strength, weight, fiber length or diameter, or mat configuration.

***Double Patenting***

4. Claims 1-9 and 21-26 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of copending Application No. 10/440708. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are obvious variants over one another.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Rejection is maintained.***

5. Claims 1-9 and 21-26 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 10/440800. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are obvious variants over one another.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Rejection is maintained.***

6. Claims 1-9 and 21-26 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of copending Application No. 10/440889. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are obvious variants over one another.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Rejection is maintained.***

***Claim Rejections - 35 USC § 103***

7. Claims 1, 3, 4, 22 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arthurs (US 5,460,870) in view of Michael (US 2003/0121989). Arthurs discloses a laminate suitable for use as a headliner comprising polyurethane foam core layer which is bonded by an adhesive to glass fiber reinforcing layers (col 1, ln 41-50). Arthurs discloses the claimed invention except for the teaching that a reinforcement layer comprising carbon fibers is provided adjacent to the polyurethane foam layer.

Michael discloses a headliner [0002] comprising fibers selected from a group consisting of natural fibers, synthetic fibers, and mixtures thereof. Natural fibers include sisal, hemp, and kenaf fibers and synthetic fibers include carbon fibers [0007]. The resinous binder that binds the fibers together includes a thermoset resin including a urethane resin binder [0010]. It would have been obvious to one having ordinary skill in the art to have used Michael's carbon fibers and thermoset binder in the laminate of Arthurs, motivated by the desire to create a laminate having enhanced lamination strength. *Regarding claim 24, it also would have been obvious to one having ordinary skill in the art to have used Michael's natural fibers and thermoset binder (i.e. urethane) in place of Arthurs' glass fibers, motivated by the desire to create a laminate that has increased strength yet maintains it lightweight properties. Regarding claim 26, it is the Examiner's position that the use of*

*Michael's carbon fibers would result in a laminate comprising fibers with a degradation point above the incineration point of the other materials of the laminate.*

***Rejection is maintained.***

8. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arthurs (US 5,460,870) and Michael (US 2003/0121989), as shown above, and further in view of Michael (US 2003/0124271). Arthurs and Michael '989 disclose the claimed invention except for the teaching that the carbon fibers are produced from petroleum pitch and that the carbon fibers comprises at least 50% of the total weight of the mat. Michael (US 2003/0124271) discloses a headliner [0028 and 0052] comprising a mat made of carbon fibers [0007]. The carbon fibers can be pitch carbon and be present in an amount from about 10-50% by weight based on the total weight of the mat [0038]. It would have been obvious to one having ordinary skill in the art to have used Michael's 50% pitch carbon as the carbon fibers in Arthurs and Michael '989, motivated by the desire to create a headliner that is lightweight and less costly to manufacture.

***Rejection is maintained.***

9. Claims 6-8, 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arthurs (US 5,460,870) and Michael (US 2003/0121989), as shown above, and further in view of Fletemier et al. (US 6,156,682). Arthurs and Michael disclose the claimed invention except for the teaching of the additional layers in the headliner as taught in the present invention.

Fletemier et al. (US 6,156,682) disclose a vehicle headliner comprising a fibrous core, a thermosetting resin, chopped fibers applied to opposite sides of the core layer, a decorative layer, and an impervious film and finish scrim applied to the opposite side of the core (col 2, ln 3-10).

The fibrous reinforcement layers comprise basalt fibers (col 4, ln 16-18). As seen in Figure 1, reference point 22 is a decorative covering, reference point 19 is a polymer film, reference points 14 and 16 are fibrous reinforcement layers, reference point 12 is the core, reference point 18 is a polymer film, and reference point 20 is a scrim. The adhesive resin is an elastomeric thermosetting resin, preferably a curable urethane (col 5, ln 19-20). It would have been obvious to one having ordinary skill in the art to have used Fletmier's scrim layer in the laminate of Arthurs and Michael, motivated by the desire to create a laminate with increased strength. It also would have been obvious to have used Fletmier's basalt fibrous reinforcement layers in the laminate of Arthurs and Michael, motivated by the desire to create a headliner that is lightweight and less costly to manufacture.

***Rejection is maintained.***

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arthurs (US 5,460,870) and Michael (US 003/0121989) and Fletmier et al. (US 6,156,682) as applied to claim 6 above, and further in view of McConnell et al. (US 4,812,186). Arthurs and Michael and Fletmier et al. disclose the claimed invention except for the teaching that there is a layer of adhesive interposed between the core and the first and second structural reinforcement layers. McConnell et al. (US 4,812,186) disclose a headliner (col 1, ln 11-13) comprising a first polyurethane adhesive (col 2, ln 19-30) and a second adhesive made of a similar adhesive composition as that applied in the first adhesive (col 3, ln 1-11). The adhesive penetrates the reinforcing layers and serves to the reinforcing layer, when cure, to the core material. It would have been obvious to one having ordinary skill in the art to have used McConnell's adhesive layers

in the headliner of Arthurs and Michael and Fletemeir et al., motivated by the desire to create a headliner that has increased structural integrity and dimensional stability.

***Rejection is maintained.***

***Response to Arguments***

11. Applicant's arguments filed June 29, 2006 and August 16, 2006, have been fully considered but they are not persuasive for the reasons set forth. Applicant argues the combination of the Arthurs and Michael references. This argument is not persuasive because both references are drawn to vehicle headliner materials and it is well known to one having ordinary skill in the art that carbon fibers provide increased strength at a low weight. Therefore, motivation exists to combine the references.

***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

UCR *UCR*

*Ula Ruddock*  
**Ula C. Ruddock**  
Primary Examiner  
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